

REMARKS

The specification is amended and claims 53-64, 67-77, 79-98, 100-102, 105, and 110-112 are pending. By this amendment, claims 53-54, 56, 60, 67-74, 77, 91, 98, 100, and 105 are amended and claims 65-66, 78, 99, 103-104, and 106-109 are amended. In view of the foregoing amendments to the claims, Applicant respectfully requests reconsideration.

The specification title is amended to more clearly reflect the subject matter applicant regards as the invention. No new matter has been added by the amendments to the specification or the claims.

Claims 69 and 91 have been amended to recite that the clutch housing accommodates the driving rotor, the driven rotor and the lock member so that the clutch is assembled as a single unit. It is believed that these amended claims overcome the 112 rejections.

Independent claim 53 has been amended to include part of the limitations of claim 56 and to include the limitations of claims 65 and 66. Claim 53 now recites a support member for supporting the rolling bodies to hold a relative positional relationship of the rolling bodies. The support member (206) is shown in Figs. 29-31. Independent claim 106, which has been cancelled in this response, recites the same features as those of claim 53. The Examiner states that claims 106-109 are rejected under 35 U.S.C. 102(b) as being anticipated by Leu (US Patent 3,110,381). However, Leu merely discloses the rolling bodies (27, 28), but does not disclose the claimed support member. Also, the other cited references do not disclose the claimed support member. Therefore, independent claim 53 and dependent claims 54-64 and 67-76, which depend from claim 53, are patentable over the cited references.

Independent claim 98 has been amended to include the limitations of claim 99. Claim 98 now recites a support member as recited in claim 53. Therefore, independent claim 98 is also patentable over the cited references.

Independent claim 77 has been amended to recite that the brush holder is located between the first and second spaces to separate the first space from the second space and that the brush holder supports the rotating shaft with a bearing so that the bearing shuts a space between the rotating shaft and a wall of the through hole. That is, as shown in Figs. 2 and 6, the brush holder 16 is fitted into the open end of the motor housing 11 to define a first space in the motor housing 11. The commutator 15 and the brush 17 are located in the first space. A second space is

defined between the unit housing 41 and the brush holder 16, and the clutch 21 is located in the second space. The brush holder 16 has a through hole through which the rotating shaft 13 extends.

When the commutator 15 is rotated, the brush 17 is worn due to the friction between the commutator 15 and the brush 17, which generates the abrasion particles. If the abrasion particles enter the clutch 21, the movement of the clutch 21 is not smooth. However, in the claimed invention, the brush holder 16 is located between the first and second spaces to separate the first space from the second space. Further, the brush holder 16 supports the rotating shaft 13 with a bearing 18 so that the bearing 18 shuts a space between the rotating shaft 13 and a wall of the through hole. This prevents the abrasion particles from entering the clutch 21, which maintains the smooth movement of the clutch 21.

The Examiner states that several claims including claim 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Profet (US Patent 3,559,499) in view of Adam et al. (US Patent 4,713,568). Specifically, the Examiner states that Adam et al. teaches the claimed commutator and brush holder. However, Adam et al. merely shows the conventional commutator and brush holder, but does not disclose or teach the claimed features as mentioned above. Also, the other cited references do not disclose the claimed features. Therefore independent claim 77 and dependent claims 79-97, which depend on claim 77, are patentable over the cited references.

Independent claim 100 has been amended to recite that a ball (24) is received by the receiving hole (23c) of the driving rotor (23) and is located between an end face of the rotating shaft (13) and the driven rotor (25). The receiving hole (23c) opens toward an end face of the rotating shaft (13) and toward the driven rotor (25) so that the ball (24) contacts the end face of the rotating shaft (13) and the driven rotor (25) (see Figs. 4 and 6).

The Examiner states that several claims including claim 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Profet (US Patent 3,559,499) in view of Schubel (US Patent 2,456,998). Specifically, the Examiner states that Schubel teaches a ball (28) used to axially support two relatively rotating components. However, Schubel merely shows the ball (28) located between two shafts, but does not disclose or teach the claimed features as mentioned above. Also, the other cited references do not disclose the claimed features. Therefore

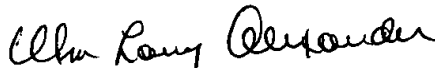
independent claim 100 and dependent claims 101, 102 and 105, which depend on claim 100, are patentable over the cited references.

New claims 110-112 depend on claim 77 and are therefore patentable. In addition, the cited references do not teach the arrangement of the bearings that support two separate shafts and the clutch that has a misalignment compensating function, as recited claims 110 and 111.

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,


Wm. Larry Alexander
Registration No. 37,269

Customer No. 24113
Patterson, Thunte, Skaar & Christensen, P.A.
4800 IDS Center
80 South 8th Street
Minneapolis, Minnesota 55402-2100
Telephone: (612) 349-5757